



Northeastern Florida Bay MFL Update

Water Resources Advisory Commission

January 2, 2014

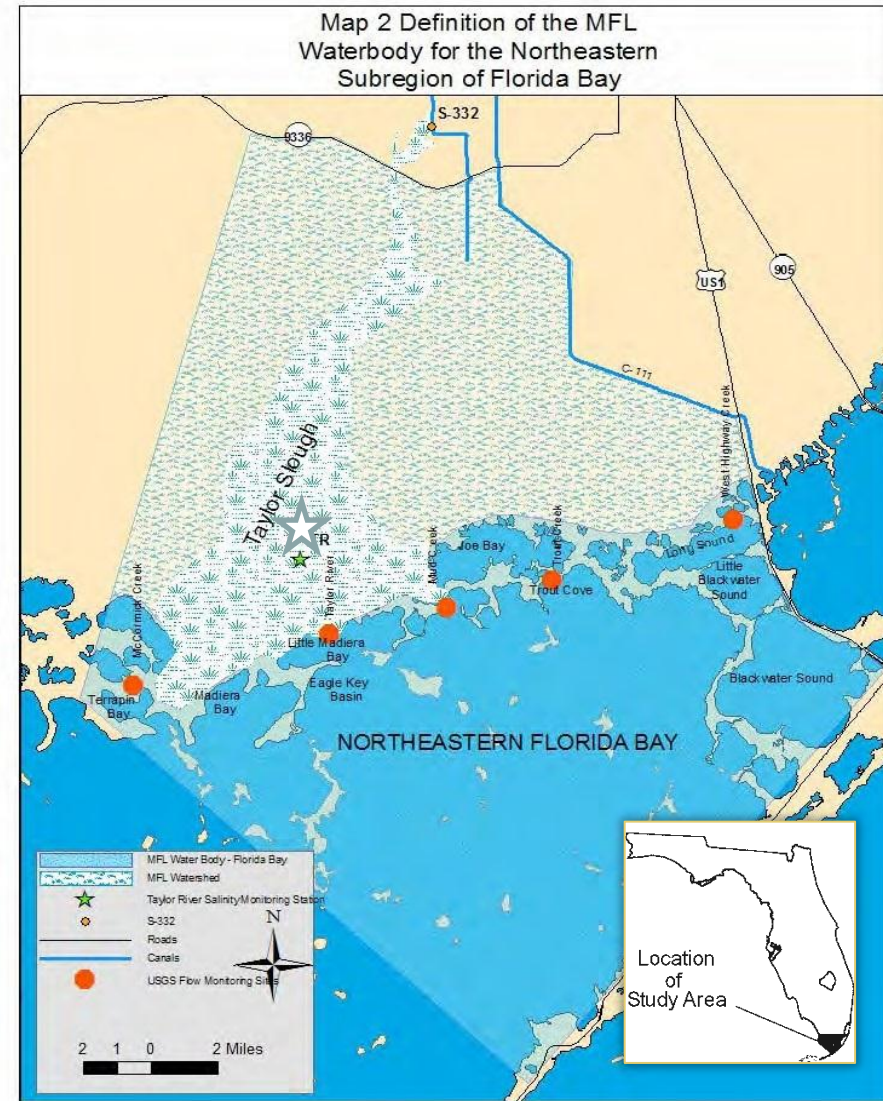
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Minimum Flows and Levels - Background

- Required by statute to establish MFLs for water bodies at risk (Authority 373.042 and 373.0421)
- Identify the point at which further withdrawals cause “significant harm” to the water resources of the area
- MFLs are set at the significant harm level
 - Temporary loss of functions from a change in surface or ground water hydrology
 - Takes more than 2 years to recover
- Recovery and prevention strategies are updated through water supply plans

Florida Bay MFL Background

- Florida Bay MFL was adopted on December 12, 2006
 - Salinity-habitat relationship
 - Modeled assessment of flow-salinity relationship
 - Independent Scientific Peer review
- Prevention Strategy adopted
 - CERP Projects and expanded monitoring
 - Review of MFL required in rule



Changes Since MFL Adopted

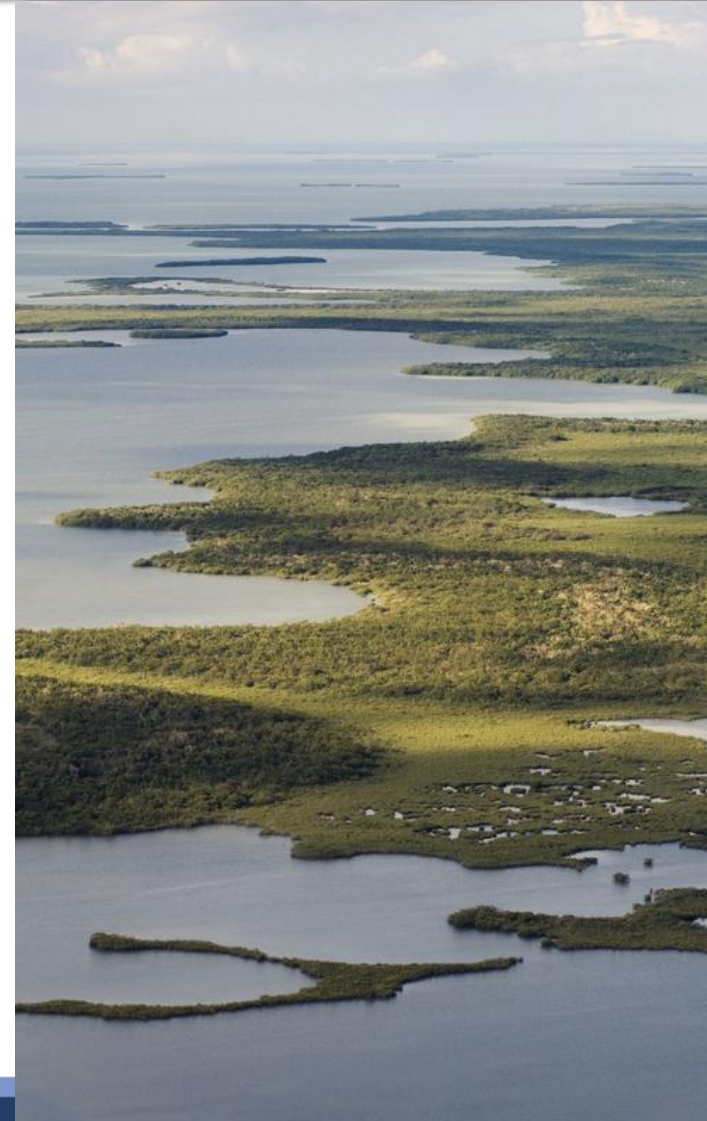
- Expanded monitoring implemented
- Water Resource Development Projects
 - C-111 Western Spreader Canal
 - Tamiami Trail One Mile Bridge
- Everglades Restoration Transition Plan (ERTP) operations implemented
- LEC 2013 Regional Water Supply Plan

Florida Bay MFL Criteria

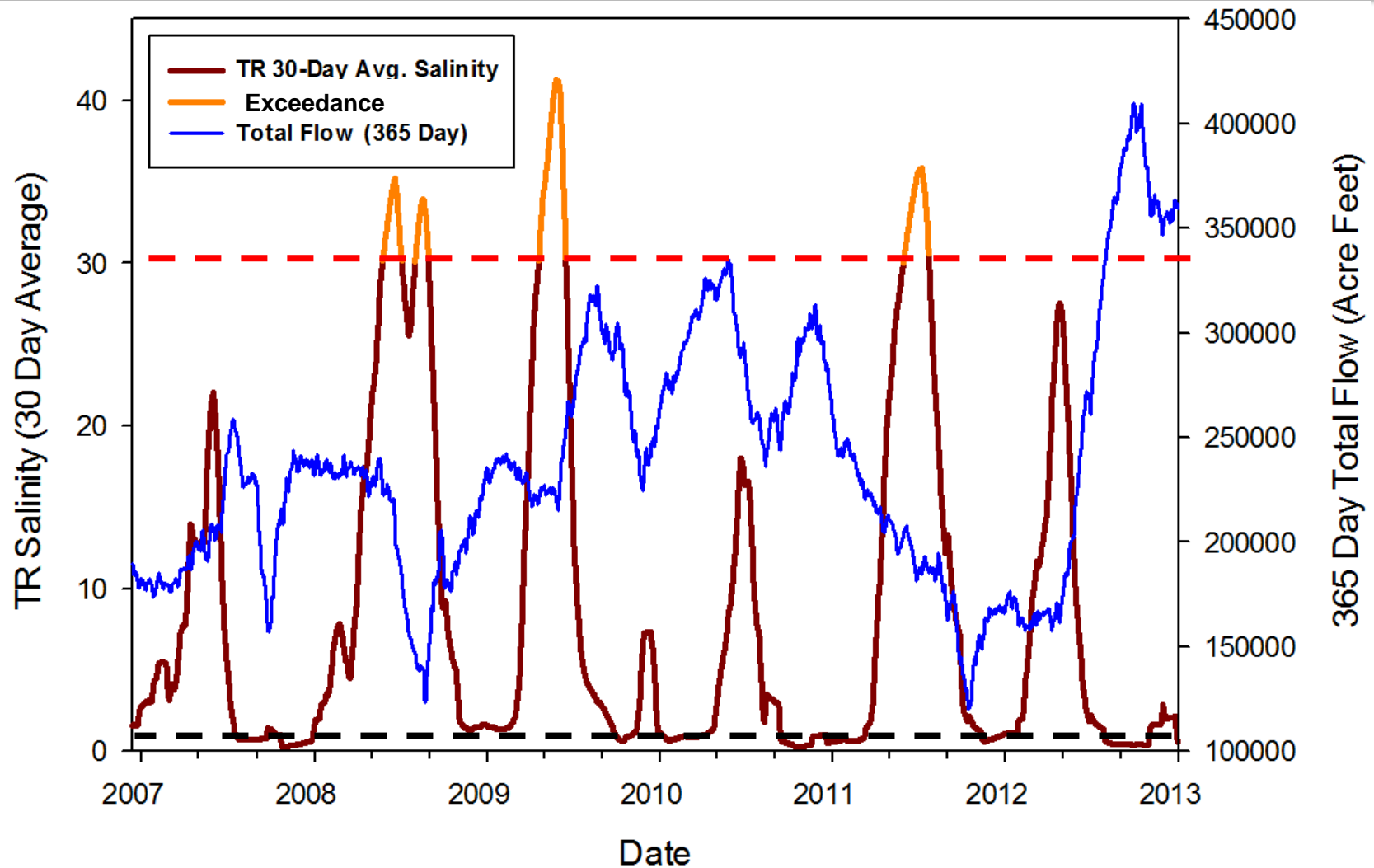
- **Minimum flow component** - net discharge into Bay is 105,000 acre-feet of water over a 365 day period
- **Duration component** – An exceedance occurs when avg. salinity over 30 or more consecutive days >30 ppt
- **Return frequency component** – A violation occurs when an exceedance occurs during each of two consecutive years, more often than once in a ten-year period

Objectives of the Review

1. Assess the existing MFL criteria using new information and confirm that significant harm threshold is adequate for the Bay
2. Determine if the MFL criteria have been violated since the rule was established in 2006
3. Assess MFL compliance with the three regional changes in place under existing and future (2030) demand conditions
4. Investigate hydrologic relationships with new data



MFL Compliance - Salinity and Flows



MFL Related Key Findings

- No violations of the Florida Bay MFL criteria since rule was established
 - The flow criteria of 105,000 acre-feet over a 365-day period (total from the five tidal creeks) has been met
 - 30 day average salinity >30 was exceeded in 3 of 6 years but no violation occurred
 - No indication of significant harm to the resources
- Salinity criterion of 30 at TR site is an effective and ecologically realistic threshold for significant harm for the Bay.
- Predicted regional changes since 2006 improve flows by 13% and reduce the chance of violations.
- Evaluation of 2030 WU demands with regional changes indicate that no MFL violations are expected

Conclusions from Current Review

- No revisions to existing rule criteria are warranted at this time
 - Flow and salinity criteria are reliable indicators for significant harm
 - No violations expected in the future
- Elements of the existing prevention strategy plan should be periodically updated with the LEC water supply plan
- Continue rule specified monitoring and research
- Continue to the review MFL periodically when significant changes occur with full implementation of Modified Water Deliveries and Central Everglades Planning Project
- Review serves as a good baseline for future regional improvements (CERP projects)

Next Steps

- Final draft technical document submitted to FDEP – Dec. 31, 2013
- Input from stakeholders received over next two weeks
- Finalize technical document – Jan. 31, 2013
- Implement recommendations for monitoring and research





Questions

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